

INTERSTATE COMMERCE COMMISSION

IN RE INVESTIGATION OF AN ACCIDENT WHICH OCCURRED ON
THE DENVER & INTERURBAN RAILROAD, NEAR GLOBEVILLE,
COLO., ON SEPTEMBER 6, 1920

NOVEMBER 17, 1920

To the Commission

On September 6, 1920, there was a head-end collision between two passenger trains on the Denver & Interurban Railroad near Globeville, Colo., which resulted in the death of 11 passengers and 2 employees, and the injury of 209 passengers and 5 employees. This accident was investigated jointly with the Public Utilities Commission of Colorado, and as a result of this investigation I respectfully submit the following report:

The Denver & Interurban Railroad is a branch of the Colorado & Southern Railway, the rules of which govern Denver & Interurban trains. Denver & Interurban trains are operated between Denver and Boulder, 31 miles north of Denver, over the Denver Tramway Co.'s tracks between Denver and Globeville and over Denver & Interurban tracks between Globeville and Denver & Interurban Junction, at which point the line branches, one line extending to Louisville Junction and the other to Webb Junction, and between these two junctions and Boulder the trains of the Denver & Interurban Railroad operate over the tracks of the Colorado & Southern Railway. From Marshall, between Louisville Junction and Boulder, a branch line extends to Eldorado Springs, this is also used jointly by the trains of the two railroads.

On this line Denver & Interurban employees are ordinarily relieved by Denver Tramway employees at Globeville, the tramway employees operating the interurban cars between that point and the city loop in Denver and return, but on account of a strike of the Denver Tramway employees at the time of this accident it was the practice for the motormen and flagmen of the Denver & Interurban cars to operate them into the city as far as the Denver & Interurban car barns and to turn them there, the conductors in the meantime remaining at Globeville.

At Globeville there is a short section of double track extending about 400 feet north of the station between this point and Denver

& Interurban Junction, within which territory this accident occurred, the line is single track, over which trains are operated by time-table and train orders, which are handled by Colorado & Southern dispatchers and operators, there is no block-signal system in use. Under a footnote in the time-table northbound trains are superior to southbound trains in the same class.

The accident occurred approximately 3,000 feet north of Globeville Station. Approaching this point from the end of double track at Globeville, the track is tangent for a distance of about 1,000 feet, followed by a 3-degree curve to the right, 755 feet in length, then there is a tangent 276 feet long and a 2-degree curve to the left 1,115 feet long, in about the center of which the accident occurred. Approaching this curve from the north there is a tangent about 1,200 feet in length. The grade at the point of accident is 1 per cent ascending for northbound trains. Illustration No. 1 is a view

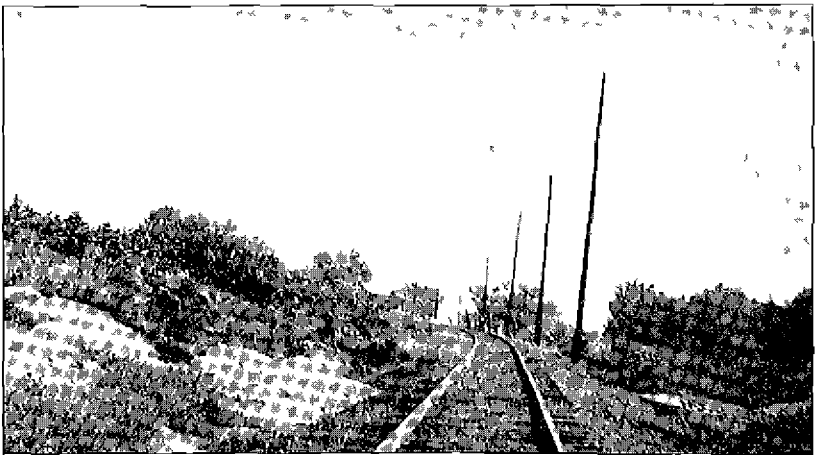


FIG. 1—View approaching point of accident from the south

approaching the point of accident from the south, taken from about the point where the motorman of the northbound train first saw the southbound train, the distance to the approximate point of accident where the people are shown standing on the track, is about 360 feet. Illustration No. 2 is a view approaching from the north, taken from the tangent track immediately north of the curve on which the accident occurred, while illustration No. 3 is taken from a point opposite the large tree shown on the right of the track in illustration No. 2, the man standing in the center of the track is at the approximate point of accident. The weather at the time of the accident was clear.

Southbound passenger train No. 308 consisted of motor 153, and was in charge of Conductor Grenamyre and Motorman Stevens. This train was due at Globeville at 11:30 a. m. It left Boulder Junc-

tion at 10 41 a m , passed Westminster, the last open telegraph station north of the point of accident and approximately 2 miles therefrom, at 11 24 a m , 6 minutes late; and at about 11 34 a m , while



FIG 2—View approaching curve from the north

traveling at a speed estimated to have been about 35 miles an hour, collided with extra 158

Northbound passenger train extra 158, consisting of motor 158 and a trailer, was in charge of Conductor Schulze and Motorman

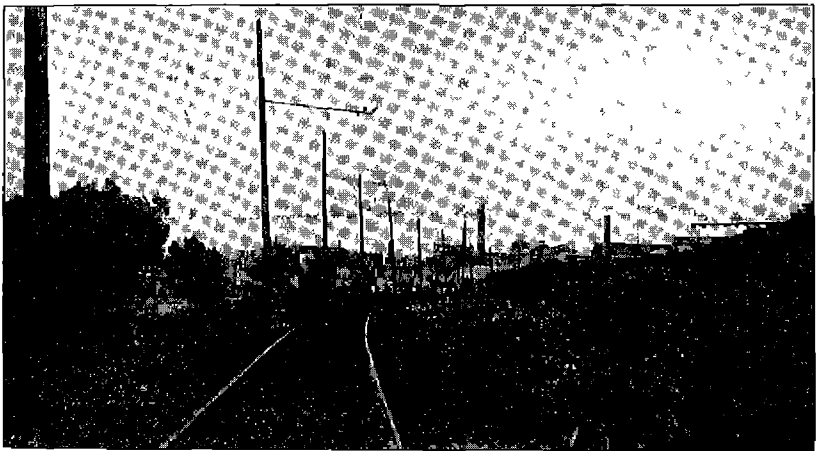


FIG 3—View of curve approaching from the north, taken opposite tree shown in Fig 2

Cripps This was an excursion train in service between Denver and Eldorado Springs, and on the day of the accident had made one round trip between these points before the trip on which the accident occurred On its second round trip extra 158 arrived at

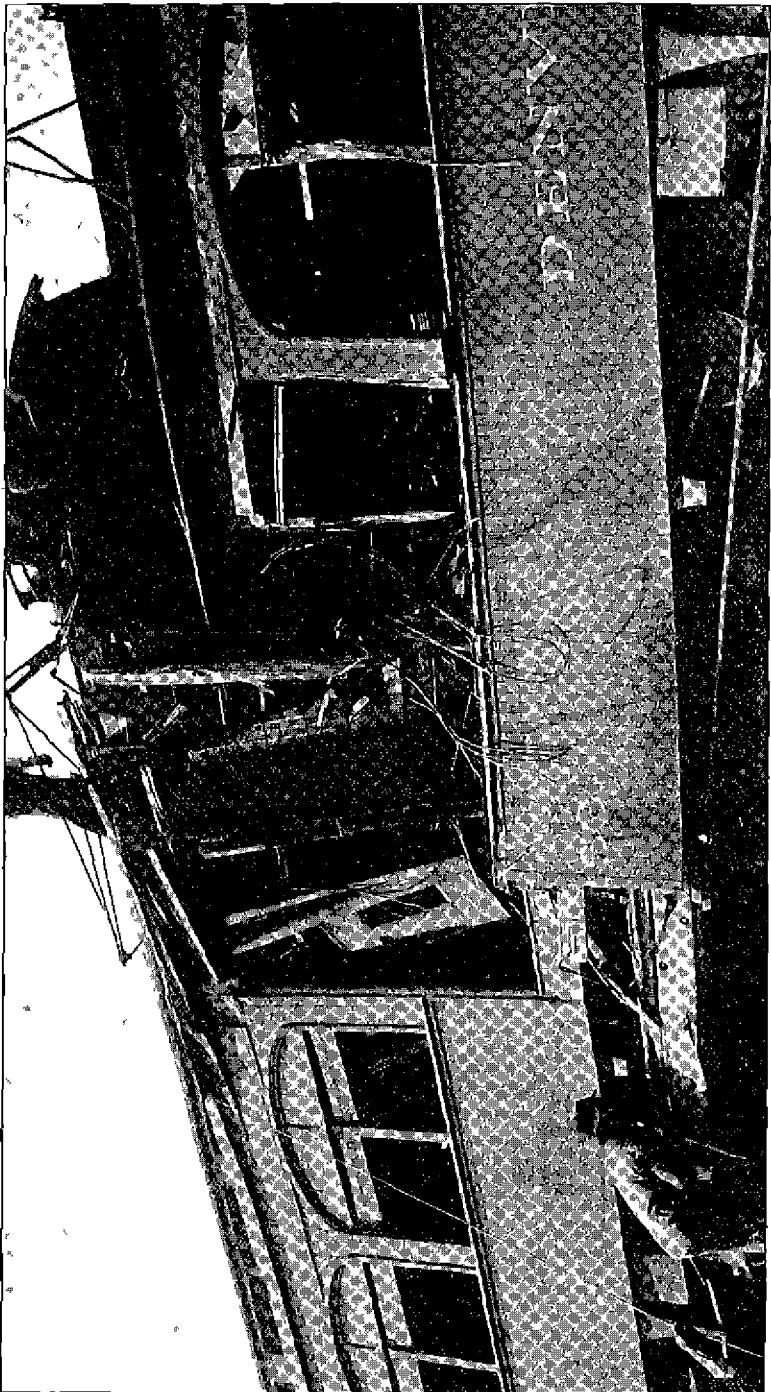


Fig 4 —View of motors 153 and 158 taken at point of accident

Globeville at 11 27 a m The conductor and motorman received a clearance card and copies of two train orders, Nos 52 and 8 Train order No 8 was a slow order and did not apply to the section of track on which the accident occurred Train order No 52, Form 19, reads as follows

Motors 158 and 152 run as 2 passs extras Globeville to Marshall on 2nd trip with right over extra 703 south Louisville Jet to Marshall Passs extra M 158 north and No 309 may run on a 5 min block Passs extra 158 and 152 north via Louisville Jet

Extra 158 left Globeville about 11 30 a m, passed from double track to single track, and while traveling at a speed estimated to have been from 25 to 30 miles an hour collided with train No 308 at a point about one-half mile north of Globeville

Motor 153, of train No 308, was telescoped a distance of about 15 feet by motor 158, of extra 158, all of those killed were riding in motor 153 Both of these motor cars were badly damaged Illustration No 4 shows these two cars before they had been removed from the scene of the accident The employees killed were the conductor of train No 308 and a section foreman

Motorman Stevens, of train No 308, said the speed of his train was about 35 miles an hour when he saw extra 158 approaching, about 450 or 500 feet distant, he at once opened the sanders, applied the air brakes in emergency, and sounded one long blast on the whistle

When extra 158 arrived at Globeville on its second northbound trip to Eldorado Springs, Conductor Schultz went into the office and obtained the two train orders previously mentioned, together with a clearance card On going to the register he found that the operator had already registered for him, and after giving copies of the orders to Motorman Cripps, and reading them, they left the office, boarded their train, and proceeded, no check of the train register having been made Conductor Schulze said he had not forgotten train No 308, but at this time was under the impression that it was due at Globeville at 12 30 p m, instead of at 11 30 a m After boarding the train Conductor Schulze gave his orders to Flagman Murphy and after telling him to watch the trolley, it being necessary to change from a low-tension trolley to a high-tension pantograph just beyond the end of double track, collected some tickets and then went forward to the front vestibule for the purpose of asking the motorman what trains were due and where they would go for them, not having any timetable of his own Before having time to make these inquiries the motorman saw train No 308 approaching and told him to jump

While Motorman Cripps was reading his orders at Globeville, he had heard a noise as of a passing truck or car, and when the conductor of northbound train No 309, which was following his train

came into the office, Motorman Cripps thought he was the conductor of train No 308 and assumed that that train had arrived, he said his train left Globeville between 11 29 a m and 11 30 a m. When he saw train No 308 approaching, Motorman Cripps sounded one blast on the whistle, applied the air brakes, opened the Sanders, and jumped. After Flagman Murphy received the orders from Conductor Schulze, he put them in his pocket and then gave his attention to changing the trolley, no stop being made at the end of double track, and he had not read the orders at the time the accident occurred.

When extra 158 started to leave Globeville, Operator Obland thought it was going only as far as the end of double track, and that it would stop there to await the arrival of train No 308. When train No 309 pulled ahead and stopped where extra 158 had been standing, the operator inquired if train No 308 had arrived, and about this time realized that extra 158 was proceeding without waiting for the arrival of train No 308. He then ran out of the office, in an effort to stop extra 158, but by that time it had passed beyond the end of double track, and he was unable to attract the attention of the crew.

Rules 83 and 83A read as follows:

83 "A train must not leave its initial station on any district, or a junction, or pass from double to single track, until it has been ascertained whether all trains due, which are superior, or of the same class, have arrived or left."

83A "A train must not leave its initial station on any district without a clearance card, Form A (revised)."

"A train must not leave a registered station until the conductor has checked the register, filled out Form 1514—revised and personally delivered copy to each of his enginemen."

Not only did Conductor Schulze fail to check the train register, as required by these rules, but he failed to fill out and deliver to Motorman Cripps a copy of Form 1514—Revised, which form is a written check of the register. It also appeared from Operator Obland's statement that he had registered the names of the crew of extra 158 and the time of its arrival, although he did not register its departure, and that it was his custom to sign the register for all crews, although he said he did not know whether he had any authority for such action. He also stated it was not customary for the crews of regular trains to check the register.

The conductor's register at Globeville contains spaces for the names of the conductor, motorman, and flagman, and for the time of arrival and departure of trains, as well as for train numbers, signals displayed, consist of trains, and the time at which the members of the crew compare their watches. Conductor Schulze said that on his first trip on the day of the accident, he checked the register with the motorman and signed his own name to the register, but did not fill in the names of the other members of his crew or any of the other

information required, leaving that for the operator to do. Conductor Schulze also stated that on neither trip did he check the register or give the motorman the required register check on Form 1514—
Revised

Rules 6A and 903 read as follows

6A "Notice of new time table must be bulletined at least twenty-four hours prior to its taking effect. Before starting on any district upon which they have not been running, or when absent for six days or over, train and enginemen must inquire for and know that they have the current time tables and supplements."

903 "Before starting on each trip conductor must have the current time-table for every part of the road to be covered by such trip, and must see that his train and enginemen are likewise provided. If a new time table is to take effect during the trip, this provision must also include the requisite copies of such time table. Must compare time with enginemen before starting, and with brakemen, flagmen, and baggagemen as soon thereafter as practicable."

Conductor Schulze did not have a time-table, and he said that on the first trip when he asked at the car barns for time-tables for himself and for Flagman Murphy, who was working his third day in two weeks on the Denver & Interurban Railroad, he was told that the time-tables were kept at Globeville. On reaching Globeville he tried to obtain time-tables from Operator Obland, but was told that the supply was exhausted. He then proceeded with his train, referring to the motorman's time-table whenever necessary. He made no further effort to obtain time-tables and did not notify the dispatcher that he was working without one. According to his statement, the day of the accident was his first in the service of the Denver & Interurban Railroad with the exception of July 4 and 5, when he had worked as assistant conductor. The records also indicate that he had worked five days on the Denver & Interurban Railroad when it was first opened for service in 1908.

It appeared from the statement of Motorman Cripps that he had been ill with ptomaine poisoning, had laid off on the day before the accident, and had tried to lay off on the day of the accident, but was told that there was no one to take his place.

This accident was caused by the failure of extra 158 to wait at Globeville until train No. 308 had arrived, for which Conductor Schulze and Motorman Cripps are responsible.

While Conductor Schulze was not an experienced man in the service of the Denver & Interurban Railroad and did not have a time-table, he had had nearly 17 years' experience on the Colorado & Southern Railway as a conductor, and should have realized the importance of properly checking the train register, using the time-table of Motorman Cripps for this purpose, the checking of the register was particularly important in view of the fact that his train was an extra starting from its terminal and was about to pass from

double track to single track. Conductor Schulze is also at fault for allowing his train to depart from Globeville without giving to Motorman Cripps a written check of the train register, Form 1514—Revised, as required by rule 83A, previously quoted.

Motorman Cripps knew that Conductor Schulze did not have a time-table and should have realized that he could not make an accurate check of the register. He assumed that train No. 308 had arrived and departed from Globeville without receiving from Conductor Schulze a copy of Form 1514—Revised, properly filled out. Under these circumstances Motorman Cripps is equally at fault with Conductor Schulze for the occurrence of this accident.

While not directly responsible for this accident, Operator Obland, located at Globeville, is open to severe censure for his practice of registering for crews at his station. Had it not been for this practice it is possible that Conductor Schulze would have properly performed his duty of checking the register and filling out the required Form 1514—Revised.

Conductor Schulze was employed by the Colorado & Southern Railway as a brakeman in 1903 and promoted to conductor in 1904, he was transferred to the service of the Denver & Interurban Railroad on July 4, 1908, and transferred back to the Colorado & Southern Railway on July 9 of the same year. He was discharged in November, 1914, for leaving a station without running orders and meeting an opposing train on the main track, being reinstated on February 1, 1915. Motorman Cripps was employed as a hostler's helper by the Colorado & Southern Railway in August, 1905, and promoted to fireman in October of the same year and to engineer in October, 1917, he had been acting as a motorman on the Denver & Interurban Railroad at various times within the past year. His record was good.

The crew of extra 158 had been on duty about 4 hours, previous to which they had been off duty 32 hours or more, the crew of train No. 308 had been on duty about 5 hours, previous to which they had been off duty nearly 20 hours.

The manner in which the train register at Globeville is handled can not be too strongly condemned. The evidence indicates that the operator registers for train crews, and that it is not customary for train crews to check the register, in fact, it was stated during the investigation that the crews of regular trains identify a train when it passes them en route, and use this identification as a check on the register. The conditions disclosed by this investigation strongly indicate that trains are commonly operated on this road without any attention being paid to the rules governing the use of the train register. Attention is also directed to the lack of time-tables for the

use of employees in train service Flagman Murphy had worked on the Denver & Interurban Railroad on three different days within a period of two weeks, while Conductor Schulze was working his first day in a month and his third day in over 12 years, neither of these employees had time-tables, although the evidence indicates that Conductor Schulze made reasonable effort to obtain them on the day of the accident

The loose practice prevailing in connection with the handling of the train register, coupled with the placing of men in train service without furnishing them with copies of the current time-table, forms the underlying reason for the occurrence of this accident. In order to eliminate danger of another accident of this character, prompt and efficient steps should be taken to see that the rules are enforced and obeyed by all concerned, and that employees are properly qualified and are furnished with necessary equipment before they are allowed to go on duty

This accident again directs attention to the weakness of the time-table and train-order method of operation. Had an adequate block system been in use on this line, this accident could have been prevented

Respectfully submitted

W P BORLAND,
Chief, Bureau of Safety

